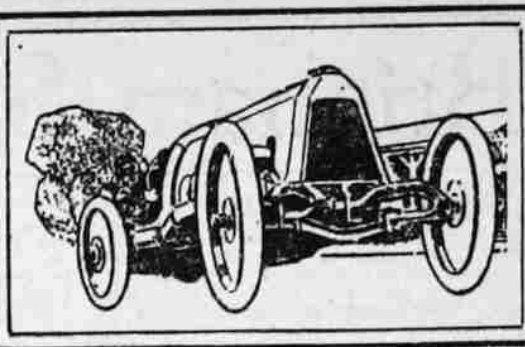


The Ogden Standard-Examiner AUTOMOBILE SECTION



HERE'S SOME NEW DOPE ON MOTORS

France Expends 15,000,000
Francs for Motor Spirits
in Past Season

Motor fire engines were used in Boston twenty years ago.

New York state uses 119,915 commercial motor vehicles.

France expended 15,000,000 francs abroad last year for motor spirits.

In Panama there are 1,401 motor vehicles registered in the Canal zone. Pennsylvania has thus far issued license tag numbers for 41,575 motor trucks for 1920.

Red is the brightest color at night, and can be seen farther than any other color on night lights.

INDIA TAKES FOURTH PLACE.

India assumes fourth place among the world's nations as a market for American-made motor cars.

New York state had an increase of 12,572 automobiles during fiscal period ending June 30.

In England a school of motorizing has been established for the education of automobile engineers.

W. E. Gannaway of Kansas City, Mo., is the only legless automobile driver in the United States.

Japanese chauffeurs must go to school and learn all about motor mechanics before a license can be obtained.

A baby motor taxi is operated in Yokohama, Japan, carrying but two passengers, at a charge of 25 yen per mile.

ENGLISH DRIVERS KEEP TO LEFT.

Because the rule of the road is to keep to the left, England is about to restrict motor cars with left-hand drives.

Nineteen-twenty will go down in history as the greatest producing year of the automobile industry in the United States.

The United States government pays for all automobiles used by the president. Gasoline, oils and repairs are included.

Motor speeding in Greece is stopped by the ingenious method of traffic police throwing a plank studded with spikes in front of the fast approaching car.

A total of 48,629 motor vehicles were in service with the American expeditionary force. Of this number there were 8,000 passenger cars and 26,000 trucks.

NEW JERSEY ORGANIZES TRAFFIC COMMISSION.

The state of New Jersey is organizing a motor traffic commission to investigate traffic conditions, with a view to the enactment of a uniform motor vehicle law.

Tractor plows operating near Medan, Sumatra, are turning up twenty acres of ground in five hours, which, it is claimed, would have taken 100 coolies one working day to perform.

Queen Marie of Rumania is a popular motorist among the royal families of Europe, and she is seen taking many long trips through her country in a high-powered motor car.

PILGRIM LANDING (By International News Service)

BOSTON—While the thirty residents of Plymouth and the rest of Cape Cod are celebrating the 300th anniversary of the landing of the Pilgrim Fathers somewhat ahead of time, they defend their cause on the ground that when the real anniversary is reached in November all the thousands of summer and autumn residents will have left for city homes. And so the tiny Cape Coders would lose thousands of dollars now being carelessly scattered about in the garages and hotels along the southern shores of Massachusetts Bay.

It is a waste of time to talk about that. Gasoline and other liquid petroleum products required for the outfit let refineries are to be kept in operation. It would be difficult to construct storage facilities holding more than a few weeks' supply. Remember that the country is producing about 50,000,000 barrels of gasoline a year. The foreign market was created to provide an outlet for this country's surplus and it must still be depended on to absorb excess production in winter time.

"How about a gasoline substitute?" Do you think a remedy lies there?"

"Scientists who work on the principle of developing a substitute may accomplish something," said Mr. Teagle. "Gasoline is a hydrocarbon and you can't reproduce it by dropping a handful of white powder into a pail of water."

ALCOHOL?

"What about alcohol?"

"We have not yet been able to produce it cheaply enough. I understand that it costs about 50 cents a gallon

to manufacture commercial alcohol. There may be some value in benzol as a gasoline substitute. It is being used in England with a fair degree of satisfaction, and to some extent in the United States."

"How about changing the design of automobile engines so they can use heavier petroleum distillates?"

"That might be of value if we were producing a large surplus of kerosene and gas oil," explained Mr. Teagle. "But demand for these products has increased even more rapidly than for gasoline. Ninety per cent of our farmers depend upon kerosene for illumination. The tractor and irrigation pump must be fueled if we are not to suffer a crop shortage."

The automobilist cannot be made a preferred customer, so that a higher percentage of gasoline will be refined from petroleum. We have oil-burning merchant ships to take care of and other needs, national in scope, to satisfy."

"We really are in the position of a tailor who, with only so much cloth available, would ask his customers to try to get along on two suits a year instead of four."

POSITION OF TAILOR

Mr. Teagle recalled that when the automobile first came into use he was selling gasoline, then a by-product, from the tail end of a tank wagon at 5 cents a gallon.

"There was plenty of gasoline then and its cost did not bother either the automobile designer or user," he said. "Heavy engines, heavy cars, wasteful carburetion and compression have been the rule."

"Of eight million automobiles operating there is a pitifully small number getting the gasoline mileage that should be their portion."

"Would you suggest these cars be equipped with devices to increase gasoline mileage?"

"No," he replied. "My suggestion is that the public stop buying cars which have a high fuel consumption. For all practical purposes an automobile that makes 25 to 35 miles per hour would serve every need. Such a car probably would average thirty miles per gallon. Automobile manufacturers are ready to produce such cars the moment the public demands it."

In England, where gasoline sells for nearly a dollar a gallon, there is a higher gasoline mileage. In addition, the British government has decided to impose a tax of 55 per horsepower on all motor vehicles.

"America is the only country in the world that insists on high-powered, heavy motorcars. It is time we stopped it. Our highways today are good enough to permit operation of lighter cars. The man who gets from six to eight miles a gallon of gasoline in order to have a reserve engine power that will enable him to go fifty to seventy-five miles an hour is an offender against public good. Aside from the appalling death list from automobile speeding, it is wrong to waste fuel and tires in that manner."

Mr. Teagle pointed out that if the 75-horsepower engine were replaced by a 15-horsepower automobile it will be necessary to use a higher gear ratio and to make more frequent use of the gear shift—as is done in Europe. He also said that there might well be a fourth geared up speed added. The new type of car would be more economical and efficient, he stated.

If the final automobile transformation could be made without the loss of the newest car of the old type in commission today we would have little cause for concern over our ability to supply gasoline for years to come," said Mr. Teagle.

MILEAGE OF TIRE

OFTEN EXTENDED

Assistance at Right Time Will Extend Usefulness, Is Assertion

"Don't throw that old tire away," is the injunction of J. K. Hough, of the Goodyear Tire & Rubber company of California. "Few tires are completely worn out when thrown away. Most of them are capable of considerable extra mileage if given a little help. A rim cut patch or an inside tire protector will often add hundreds of miles to the life of a tire."

"A rim-cut patch is designed for application on the inside of the tire with flaps fitting underneath the bead of the tire on both sides to hold the patch in place. It is flexible and enduring and once applied, is out of sight and mind. Tires which seem hopelessly rim cut are given a new lease of life after being reinforced by a good rim-cut patch."

"And then there is the inside tire protector which is designed to provide complete reinforcement for worn and weakened casings. Its use often adds several thousand miles to tire life that appears nearly ended. It is applied on the inside of the tire as its name suggests and provides at a very low cost many miles that otherwise would be lost."

"Anything that gives a tire longer life keeps real jingling dollars in the car owner's pocket and puts off the day when the purchase of a new tire would be necessary. We are not for economy that goes to the extent of scrimping, but we believe that if the millions of tires available in this country are run properly, the ends of conservation will be met."

Caterpillar tractor will be employed in the lumbering district of Valdivia, Chile, and probably be the solution of the difficulty in moving heavy timber during the rainy season, which often lasts nine months.

CATERPILLAR TRACTOR

17

18

19

20

21

22

23

24

25

26

27

28

29

30

Remedy For Gasoline Shortage Lies in Hands of Auto Drivers, Says Standard Oil Co. President

By FLOYD MACGRIFF,
International News Service Staff
Correspondent

NEW YORK, Sept. 11.—The people of the United States can remedy the gasoline shortage almost over night and prevent a future famine, if they so wish, W. C. Teagle, president of the Standard Oil company of New Jersey and world authority on oil, declared today in an exclusive interview with the International News Service.

"The remedy," he said, lies in the American people insisting on being supplied with automobiles which will get a high mileage per gallon of gasoline. As long as they continue to buy only high-powered, heavy automobiles which can do only from eight to fifteen miles per gallon the situation will remain difficult and steadily grow worse."

"For several months dating from August 1, 1919, the American oil industry was trying to supply a current daily demand of 1,159,916 barrels to refineries from a daily crude oil output of 1,103,055 barrels."

"In recent weeks we have seen a change for the better. In July there was a gain in stocks on hand."

"We must get more miles per gallon, the maximum mileage, to avert acute hardship in the future."

"With the most optimistic view toward domestic production and imports from Mexico it is only a question of time until there will not be enough gasoline to go around, unless we adopt common sense methods of conservation."

Mr. Teagle, who has climbed into his present high position by sheer ability from the job of a tank-wagon driver, said the oil industry was bending every effort to increase crude oil production and that substantial gains are being shown over corresponding months of 1919.

CONSUMPTION FIXED

"But consumption is not a fixed quantity," said Mr. Teagle. "Automobile and tractor manufacturers, striving to meet the almost insatiable demand for motor vehicles, are keeping ahead of the refineries."

Mr. Teagle was asked what reply he could make to skeptics who would say the oil companies were exploiting the shortage situation by hoarding prices and withholding supplies.

"I think the United States government's geological reports on production and consumption are sufficient answer to that. The oil companies have to report what stocks they have on hand."

Asked if placing an embargo on gasoline exports would remedy the situation, Mr. Teagle said:

"It is a waste of time to talk about that. Gasoline and other liquid petroleum products required for the outfit let refineries are to be kept in operation. It would be difficult to construct storage facilities holding more than a few weeks' supply. Remember that the country is producing about 50,000,000 barrels of gasoline a year. The foreign market was created to provide an outlet for this country's surplus and it must still be depended on to absorb excess production in winter time."

"How about a gasoline substitute?" Do you think a remedy lies there?"

"Scientists who work on the principle of developing a substitute may accomplish something," said Mr. Teagle. "Gasoline is a hydrocarbon and you can't reproduce it by dropping a handful of white powder into a pail of water."

ALCOHOL?

"What about alcohol?"

"We have not yet been able to produce it cheaply enough. I understand that it costs about 50 cents a gallon

to manufacture commercial alcohol. There may be some value in benzol as a gasoline substitute. It is being used in England with a fair degree of satisfaction, and to some extent in the United States."

"How about changing the design of automobile engines so they can use heavier petroleum distillates?"

"That might be of value if we were producing a large surplus of kerosene and gas oil," explained Mr. Teagle. "But demand for these products has increased even more rapidly than for gasoline. Ninety per cent of our farmers depend upon kerosene for illumination. The tractor and irrigation pump must be fueled if we are not to suffer a crop shortage."

The automobilist cannot be made a preferred customer, so that a higher percentage of gasoline will be refined from petroleum. We have oil-burning merchant ships to take care of and other needs, national in scope, to satisfy."

"We really are in the position of a tailor who, with only so much cloth available, would ask his customers to try to get along on two suits a year instead of four."

POSITION OF TAILOR

Mr. Teagle recalled that when the automobile first came into use he was selling gasoline, then a by-product, from the tail end of a tank wagon at 5 cents a gallon.

"There was plenty of gasoline then and its cost did not bother either the automobile designer or user," he said. "Heavy engines, heavy cars, wasteful carburetion and compression have been the rule."

"Of eight million automobiles operating there is a pitifully small number getting the gasoline mileage that should be their portion."

"Would you suggest these cars be equipped with devices to increase gasoline mileage?"

"No," he replied. "My suggestion is that the public stop buying cars which have a high fuel consumption. For all practical purposes an automobile that makes 25 to 35 miles per hour would serve every need. Such a car probably would average thirty miles per gallon. Automobile manufacturers are ready to produce such cars the moment the public demands it."

In England, where gasoline sells for nearly a dollar a gallon, there is a higher gasoline mileage. In addition, the British government has decided to impose a tax of 55 per horsepower on all motor vehicles.

"America is the only country in the world that insists on high-powered, heavy motorcars. It is time we stopped it. Our highways today are good enough to permit operation of lighter cars. The man who gets from six to eight miles a gallon of gasoline in order to have a reserve engine power that will enable him to go fifty to seventy-five miles an hour is an offender against public good. Aside from the appalling death list from automobile speeding, it is wrong to waste fuel and tires in that manner."

Mr. Teagle pointed out that if the 75-horsepower engine were replaced by a 15-horsepower automobile it will be necessary to use a higher gear ratio and to make more frequent use of the gear shift—as is done in Europe. He also said that there might well be a fourth geared up speed added. The new type of car would be more economical and efficient, he stated.

If the final automobile transformation could be made without the loss of the newest car of the old type in commission today we would have little cause for concern over our ability to supply gasoline for years to come," said Mr. Teagle.

MILEAGE OF TIRE

OFTEN EXTENDED

Assistance at Right Time Will Extend Usefulness, Is Assertion

"Don't throw that old tire away," is the injunction of J. K. Hough, of the Goodyear Tire & Rubber company of California. "Few tires are completely worn out when thrown away. Most of them are capable of considerable extra mileage if given a little help. A rim cut patch or an inside tire protector will often add hundreds of miles to the life of a tire."

"A rim-cut patch is designed for application on the inside of the tire with flaps fitting underneath the bead of the tire on both sides to hold the patch in place. It is flexible and enduring and once applied, is out of sight and mind. Tires which seem hopelessly rim cut are given a new lease of life after being reinforced by a good rim-cut patch."

"And then there is the inside tire protector which is designed to provide complete reinforcement for worn and weakened casings. Its use often adds several thousand miles to tire life that appears nearly ended. It is applied on the inside of the tire as its name suggests and provides at a very low cost many miles that otherwise would be lost."

"Anything that gives a tire longer life keeps real jingling dollars in the car owner's pocket and puts off the day when the purchase of a new tire would be necessary. We are not for economy that goes to the extent of scrimping, but we believe that if the millions of tires available in this country are run properly, the ends of conservation will be met."

Caterpillar tractor will be employed in the lumbering district of Valdivia, Chile, and probably be the solution of the difficulty in moving heavy timber during the rainy season, which often lasts nine months.

CATERPILLAR TRACTOR

17

18

19

20

21

22

23

24

25

26

27

28

29

30

RAISE IN GAS EXPECTED DAILY

Motor Trucks Consume Many
Gallons Daily; Fuel Is
Expensive

Motor trucks are heavy consumers of gasoline and with the threatened shortage and rising price of motor fuel, the matter of gasoline consumption is assuming serious importance to truck users. Here another advantage of the trailers comes to the front.

The ton-mile consumption of fuel is much less when trailers or semi-trailers are used with motor trucks than when trucks are used alone. A four-wheel trailer towed by a motor truck doubles the load capacity but only increases the fuel consumption by twenty to twenty-five per cent.

A semi-trailer often triples the capacity of the truck, a one-ton truck drawing a three-ton semi-trailer but carrying no independent load itself while a two-ton truck draws a five-ton or six-ton semi-trailer. The fuel consumption of these small trucks is barely half that of the three-ton or five-ton trucks that would be required to haul the loads carried by the semi-trailers. Many users of trailers have learned these facts in actual service, to their great satisfaction. As a five-ton truck uses from ten to twenty gallons of "gas" a day, a saving of half the consumption at 30 cents a gallon amounts to from \$3 to \$6 a day—not an inconsiderable item in the running expense of a motor truck.

A five-ton truck, traveling sixty miles a day, returning empty on each trip, moves five tons thirty miles. If it averaged five miles to the gallon, it uses twelve gallons of "gas." At 30 cents a gallon, this costs \$3.60. Thirty ton-miles at \$3.60 gives 12 cents per ton-mile as the cost for fuel alone.

But if a five-ton trailer is used with the truck and only fifty miles are covered in a day, the ton-mileage is increased to fifty. An increase of twenty per cent in consumption gives four miles to the gallon or twelve and one-half gallons per day. At thirty cents the cost is \$3.75, which, divided by fifty gives 7½ cents as the ton-mile cost for fuel.

The Automobile Association of Great Britain has prepared elaborate plans for the reception and guidance of American tourists visiting England.

AMERICAN TOURISTS

17

18

19

20

21

22

23

24

25

26

27

28

29

30

NEWER STYLE OF TIRE NOW MADE

Straight Side Dominates Over
Clincher and Q. D.
Types

When a tire salesman says, "What will you have, Q. D. clincher or straight side, or regular clincher," what do you say? Here are the talking points that will give you confidence and relieve your embarrassment:

A Q. D. stands for quick detachable. A Q. D. tire simply slides on and off the rim, requiring no stretching. Generally the outside flange or edge of the rim is also detachable so that this can be done. Some of these tires are being used on split rims which are easily forced "out-of-round."

Some quick detachable casings are built with a clinch or hook which fits into the flanges of the rim which are also hooked. Others do not have this clinch but are straight. This has given rise to the term "straight side."

The quick detachable casing with the clinch to hold it on the rim was the original type. The straight side casing represents an improvement or later development in the quick detachable, eliminating innumerable rim flanges, according to rubber company officials. It was found that a wire bead imbedded in the bead edge of a tire was sufficient to hold it on the rim without the aid of the hook.

The fact is that there are two types of hard non-flexible beads—Q. D. clincher and Q. D. straight side. The term clincher simply indicates that the tire has a clinch. A regular clincher has an elastic bead that the tire may be stretched in applying, while a Q. D. clincher has a wire bead.

Regular clincher tires are ordinarily used on small cars. This includes tire sizes up to and including 31x1, with the exception of the 32x3½. Tires above this size are ordinarily built Q. D. straight side. Quick detachable clincher types are going out of use.

For those motorists who have old style rims, a bead filler has been perfected so that straight side tires may be used without inviting rim cutting.

BEAD FILLER

17

18

19

20

21

22

23

24

25

26

27

28

29

30

TIRE IS OFTEN HELD A MYSTERY

Line on Makeup of Familiar
Part Is Given by Rubber
Authority

The average motorist knows considerably more about dozens of parts in his car than he does about his tires, even though a tire has only five principal parts. These are the carcass, the tread, the bead, the side-wall and the breaker strip.

The carcass is made of layers or plies of fabric impregnated with rubber. Fabric is used to give the casing tensile strength, while the rubber holds it together and gives it wearing qualities.

The bead gives shape to the tire and anchors it to the rim. In the clincher tire, this bead is made of elastic rubber, as it must stretch in order to get the tire on the rim. In the straight side tire, the bead is made of a wire cable imbedded in hard rubber, as the rim may be slit to mount the tire. Here there is no need of stretching.

The side-wall is the light rubber covering on the side of the tire as far as the tread. Its purpose is to protect the carcass from injury by the elements.

The breaker strip supplies the maximum amount of resiliency between the tread and the carcass. It is just under the tread, and it made of web-woven fabric imbedded in cushion gum. It firmly rivets tread and carcass.

The tread is the running surface of the tire. It is made of heavy rubber carefully compounded, according to tire men, to give maximum wearing qualities. A design is molded in the tread for traction purposes.

GRAPPLERS FOR LIVING

SAN FRANCISCO, Sept. 11.—"Jack the Grappler," as Frederick Link is known along the San Francisco waterfront, asserts he averages an income of \$5,000 a year, "fishing" for articles dropped into the San Francisco bay by accident from ferryboats, liners and other craft. Link says he has been plying his trade since 1884, using only what he terms "educated grappling hooks." Diamond rings, wallets, coils of wire, watches and even boxes of motion picture films have been brought up by Link from the bottom of the bay. When employed to recover a lost article he charges \$25 for his work only upon delivery of the article.

LOST ARTICLES

17

18

19

20